

APPLICANT(S): Iddan, Gavriel et al.
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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently Amended) A device for in vivo ~~imaging comprising~~ imaging, the device comprising:

a housing, the housing enclosing at least:

at least one CMOS imaging camera, at least one illumination source for illuminating a site in vivo, an optical system for imaging the site in vivo onto the CMOS imaging camera and a transmitter for transmitting ~~video~~ an output of the CMOS imaging camera.
2. (Original) The device according to claim 1 wherein the CMOS imaging camera comprises active pixel circuitry.
3. (Original) The device according to claim 2 wherein the CMOS imaging camera comprises a correlated double sampler for processing an analog signal produced by the active pixel circuitry.
4. (Original) The device according to claim 1 wherein the CMOS imaging camera comprises an analog to digital converter having serial output.
5. (Original) The device according to claim 1 wherein the CMOS imaging camera comprises an encoding and randomizing unit for defining frame and row parameters and for priming digital signals for transmission.

6. (Currently Amended) The device according to claim 1 wherein the CMOS imaging camera ~~comprises~~ comprises:

active pixel circuitry, said circuitry producing an analog signal;

a correlated double sampler for processing the analog signal produced
by the active pixel circuitry;

an analog to digital converter having serial output for converting the
analog signal to a digital signal; and

an encoding and randomizing unit for defining frame and row
parameters and for priming the digital signal for transmission.

7. (Original) The device according to claim 1 wherein the CMOS imaging camera is an ultra
low powered camera and has reduced sensitivity to light in the red spectrum.

8. (Original) The device according to claim 1 wherein the illumination source is a white LED.

9. (Original) The device according to claim 1 wherein the illumination source comprises a
refracting crystal matrix having at least one blue LED chip integrated therein.

10. (Original) The device according to claim 1 wherein the optical system comprises an
aspherical focussing lens.

11. (Original) The device according to claim 10 wherein the optical system further comprises at
least one collimator for collecting remittent light.

12. (Original) The device according to claim 1 wherein the transmitter comprises an internal
electronic switch for converting a logic of a normally open switch to a normally closed logic.

13. (Original) The device according to claim 1 wherein the transmitter comprises a control block
for controlling the CMOS imaging camera.

14. (Original) The device according to claim 13 wherein the control block further controls the illumination source.
15. (Currently Amended) A swallowable capsule for in vivo imaging of the gastrointestinal tract, said capsule ~~having~~ comprising a housing, the housing including at least an optical window and comprising, the housing enclosing at least:
- at least one CMOS imaging camera;
 - at least ~~one illumination source~~ two illumination sources for illuminating a gastrointestinal tract site;
 - an optical system for imaging the gastrointestinal tract site onto the CMOS imaging camera; and camera, the optical system being separated from the optical window by a gap, the camera imaging the site via the optical window and via the optical system, and the illumination sources illuminating the site directly via the optical window and not via the optical system; and
 - a transmitter for transmitting ~~video~~ an output of the CMOS imaging camera.
16. (Currently Amended) The swallowable capsule according to claim ~~15~~ 58 wherein the CMOS imaging camera comprises active pixel circuitry.
17. (Original) The swallowable capsule according to claim 16 wherein the CMOS imaging camera comprises a correlated double sampler for processing an analog signal produced by the active pixel circuitry.
18. (Currently Amended) The swallowable capsule according to claim ~~15~~ 58 wherein the CMOS imaging camera comprises an analog to digital converter having serial output.

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19. (Currently Amended) The swallowable capsule according to claim ~~15~~ 58 wherein the CMOS imaging camera comprises an encoding and randomizing unit for defining frame and row parameters and for priming digital signals for transmission.
20. (Currently Amended) The swallowable capsule according to claim ~~15~~ 58 wherein the CMOS imaging camera ~~comprises~~ comprises:
- active pixel circuitry, said circuitry producing an analog signal;
 - a correlated double sampler for processing the analog signal produced by the active pixel circuitry;
 - an analog to digital converter having serial output for converting the analog signal to a digital signal; and
 - an encoding and randomizing unit for defining frame and row parameters and for priming the digital signal for transmission.
21. (Currently Amended) The swallowable capsule according to claim 15 wherein the ~~illumination source is a white LED~~ illumination sources include white LEDs.
22. (Original) The swallowable capsule according to claim 15 wherein the illumination sources ~~comprise -illumination source-~~ comprises a refracting crystal matrix having at least one blue LED chip integrated therein.
23. (Original) The swallowable capsule according to claim 15 wherein the optical system comprises an aspherical focussing lens.
24. (Original) The swallowable capsule according to claim 23 wherein the optical system further comprises at least one collimator for collecting remittent light.

25. (Original) The swallowable capsule according to claim 15 wherein the transmitter comprises an internal electronic switch for converting a logic of a normally open switch to a normally closed logic.
26. (Currently Amended) The swallowable capsule according to claim ~~15~~ 58 wherein the transmitter comprises a control block for controlling the CMOS imaging camera.
27. (Currently Amended) The swallowable capsule according to claim 26 wherein the control block further controls the illumination ~~source~~ sources.
28. (Original) The swallowable capsule according to claim 27 wherein the control block sends a shutdown signal to the imager to inactivate it and to the transmitter itself to inactivate main capsule subsystems.
29. (Currently Amended) The swallowable capsule according to claim ~~28~~ 15 wherein ~~the control block sends a shutdown signal~~ is sent from a control block for a ~~two hour~~ period following activation of the capsule transmitter.
30. (Currently Amended) The swallowable capsule according to claim 15 wherein the transmitter transmits ~~on~~ via radio frequency.
- 31-55. (Cancelled).
56. (New) The device according to claim 1, wherein the device is about 30 mm in length.
57. (New) The swallowable capsule according to claim 15, wherein the swallowable capsule is about 30 mm in length.

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58. (New) The swallowable capsule of claim 15, wherein the at least one imaging camera comprises a CMOS imaging camera.

59. (New) The device according to claim 1 wherein the transmitter transmits via radio frequency.